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AUTHOR Moriarty, Dick; And Others
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ABSTRACT

The incidence of eating disorders is much higher among children and young adults involved in sport and fitness activities. When weight loss is followed by excessive exercise, certain biological and social reinforcers become evident. This is also followed by a diminished appetite, increased narcissistic investment in the body, and an elevated production of endorphins which enhances mood. A number of studies at the University of Windsor Sport Institute for Research/Change Agent Research (SIR/CAR) conducted throughout the 1970's and 1980's showed that when youth sports programs are professionalized, commercialized, and politicized, maladaptive behavior among participants was a probable outcome. Sport- and fitness-induced eating disorders, and steroid use are a form of iatrogenesis, or education and health profession induced illness. Parents, sport administrators, teachers, coaches, and fitness instructors do not cause, cannot control, and cannot cure eating disorders or drug abuse. They can nevertheless contribute, either positively or negatively, to the prevention of the problem or prognosis in this illness. They can contribute positively through identification, facing up to the problem, practicing tough love intervention techniques, providing a referral to a qualified health professional, and providing both the eating-disordered individual and themselves with alternative coping mechanisms and lifestyle behaviors. (LLL)

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The Role of Sport/Fitness and Eating Disorders
Cosmetic Fitness from Starvation to Steroids

by

Dick, Mary and Kathleen Moriarty
and Christine Ford

Sport Institute for Research/Change Agent & Research
(SIR/CAR)

Bulimia Anorexia Nervosa Association
(BANA-Can/Am)

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THE ROLE OF SPORT/FITNESS AND EATING DISORDERS: COSMETIC FITNESS-FROM STARVATION TO STEROIDS

BY

Dick, Mary, Kathleen Moriarty and Christine Ford

SIR/CAR-BANA University of Windsor,
Windsor, Ontario, Canada

Eating disorders are sometimes referred to as "a diet and fitness/athletic program gone wild!" (Moriarty and Moriarty, 1988). Eating disordered individuals start a diet like anyone else, but for some unknown reason the eating disordered individual is driven to further weight loss, even to the point of emaciation. Similarly, what starts out to be a moderate, healthy exercise program or sporting recreational activity ends up frenzied compulsive exercise and/or athleticism which dominates the person's life. The sport and fitness program which started out as the solution to the stress problems of life in turn becomes the problem.

Research studies have shown that the incidence of eating disorders is much higher among children and young adults involved in sport and fitness activities. Requests have been received by BANA-Can/Am for assistance from sport administration and fitness management professionals from throughout North America suggesting that certain predisposed individuals in the sport and fitness community are at high risk. Studies at York University (Davis and Cowles, 1988) and at the University of Windsor (Mable et al., 1985, 1986 and 1989; Loosemore and Moriarty 1990; Wilkinson, Regier and Moriarty, 1989; Rawlings, 1989 and 1990) are investigating the association between sport/exercise and eating disorders.

Although eating disorders are generally perceived as a female adolescent problem, there are statistics to suggest that a growing number of males

(Loosemore, Marble, Gallen, Balance and Moriarty, 1989) and young adults (males and females) in their twenties and thirties are also engaged in this maladaptive behaviour and/or turning to steroids to enhance performance and improved appearance.

Loosemore, Mable, Galgan, Balance and Moriarty (1989) report that body image disturbance is evident in body builders, whose activities are focused on their appearance and the size of their bodies. These body builders perceive themselves to be about 15% thinner that they actually are, according to conventional standards. Studies suggest that women perceive themselves as 15% fatter that they actually are according to conventional standards (Galgan & Mable, 1986; Mable, Balance & Galgan, 1986). These findings mirror the current cultural ideals that suggest that women should be thin and men should be husky and muscular (Mishkind, Rodin, Silberstein & Striegel-Moore, 1986). While women in sport/fitness turn to eating disorders to resolve their distortion, men turn to steroids.

Eating disorders (anorexia nervosa, bulimia and steroid abuse) are health and life-threatening illnesses. Individual, familial and sociocultural influences are usually cited as underling predisposing, precipitating, and perpetuating factors. This triad of causes is easy to identify and hard to repudiate. David Garner (1984) listed five more specific socio-cultural influences which are associated with the increase in the prevalence of eating disorders:

1. Pressure to be thin - "No one can be too rich or too thin!"
2. Glorification of youth - "It's not how good you look, but how long you look good!"
3. The changing roles of females - "Having it all and doing it all in a Size 5 dress!"

4. Media images and marketing of the superwoman - "Virginia Slim and all the jazz!"
5. The sport and fitness craze - "The tyranny of athletic elitism and/or cosmetic fitness!"

EATING DISORDERS AND SPORT/FITNESS ACTIVITY

Studies have suggested that the incidence of eating disorders is much higher in children and young adults in physical activities such as dance (Garner, 1983; Anthony, Wood & Goldberg, 1982); figure skating (Perry, 1986); gymnastics (Kostar, 1983; Rosen, 1987); middle distance and marathon runners (Katz, 1986; Yates, Leehey & Shisslak, 1983) and a variety of other activities such as swimming, diving, rowing, riding and wrestling (Black & Burckes - Miller, 1988; Burckes-Miller & Black, 1988 a & b; Leichner, 1986; Rosen, 1987).

Rosen, McKeag, Hough, and Curley (1986) have suggested that some athletes tend to resort to dangerous weight control techniques if they have perceived themselves as obese at some time of their lives or have lost more weight than they originally intended. They surveyed 182 female collegiate athletes and found that 32 percent practised at least one of the weight control behaviours identified as bulimia. This population did not engage in this behaviour to enhance physical beauty but attempted to lower their body weight to achieve the highest possible performance (Rosen et al., 1986).

Muni-Brander and Lachenmeyer (1986) concluded that from a population of male high school athletes and non-athletes, twenty-five percent reported vomiting to control weight, twelve percent reported binging and vomiting, 2.7 percent abused laxatives, 1.3 percent abused diuretics and 9.5 percent used diet pills to achieve weight loss.

Burckes-Miller and Black (1986) conducted a study with 695 male and female college athletes and reported both bulimic attitudes and behaviours. Twenty-four percent of athletes reported to have recurrent binge eating episodes at least once every 1-8 days, 11.9 percent reported a loss or fear of losing control when eating and 5.3 percent ate until they were physically ill. Athletes also indicated that they were using severe weight control methods, 5.6 percent were engaged in self-induced vomiting, 3.7 percent abused laxatives, 11.9 percent fasted for at least 24 hours and 1.4 percent used enemas.

Katz (1986) suggests that extreme exercise such as long distance running can predispose individuals to eating disorders. He indicates that when weight loss is followed by excessive exercise, certain biological and social reinforcers become evident. This is also followed by a diminished appetite, increased narcissistic investment in the body, and an elevated production of endorphins which enhances mood. Katz (1986) reports that bulimic behaviour became apparent in relation with reduced running and dysphoria.

Burckes-Miller and Black (1988a) report that one-seventh of both male and female college athletes seem to have a distorted body image and perceive themselves as fat even though they had lost weight and were not overweight. About one-third of the athletes were preoccupied with food and weight and about one-tenth did not feel in control when they ate. Approximately one-quarter of the male and female athletes engaged in binging behaviour and one-twentieth of athletes reported eating until they were physically ill and significantly more of them were women than men.

COMPETITIVENESS IN SPORTS/FITNESS PROGRAMS IN MALADAPTIVE BEHAVIOUR

The number of studies at the University of Windsor Sport Institute for Research/Change Agent Research (SIR/CAR)conducted throughout the 70's and the 80's show that when children/youth sport programs are professionalized, commercialized and politicized, maladaptive behaviour among participants was a probable outcome. (Brown, Holman and Moriarty, 1984; Hyrcaiko, Moriarty and McCabe, 1978; Moriarty et al 1982; Donovan and Moriarty, 1986; Moriarty, 1983; Moriarty, Guilmett and Zaredski, 1981; Moriarty, Guilmett and LeDuc, 1978; Holman and Moriarty, 1989). MacIntosh, Bedecki and Franks in their study of Sport and Politics in Canada; Federal Government Involvement Since 1961 (1987) arrive at the same conclusion. Most recently the Dubin Commission (1990) resulting from the positive steroid test of former gold medalist Ben Johnson at the 1988 Olympics, is another testimony to the extent of steroid abuse in amateur athletics. For the most part these studies focus on males since until recently systemic discrimination in North America has made both amateur sport a professional athletics mainly a male domain. The women's movement and equity advancement over the last decade has lead to a number of studies showing overemphasis in women sport as is the case in men's sports, particularly leads to maladapted behaviour which invariably takes the form of eating disorders.

Garner (1984) reported studies assessing the relevance of competitiveness in terms of eating disorders. He reported the results of a study comparing dance students and music students from high expectation settings. The EAT (Eating Attitude Test) was administered and showed a percentage deviation from average body weight of -17.9 for dance students and only -6.3 for music students (Garner, 1983). In a further analysis looking at the prevalence

of anorexia nervosa and symptoms of anorexia nervosa, the total dance group was further subdivided and it was found that those in the more competitive setting were -16.8% deviant from average body weight, while those in a less competitive setting were -8.6 from normal body weight. The message here is that the degree of competitiveness bears a direct relationship with the degree of severity of eating disorders, and further that women involved in activities such as dance (and it might be added, gymnastics, figure skating, aerobic dance and fitness programs) which carry with them an expectation of slimness and also place physical demands upon the participants, place the individual much more at risk than competitive settings such as university and music students encounter (-3.7 deviation from average body weight) or even modelling students (-11.9%).

Another study worthy of note is that of Anthony, Wood and Goldberg (1982) of 245 college females involved in areas of study emphasizing exercise (physical and health education) or body image (dance and drama). Utilizing and Eating Attitude Test (EAT) the researchers found significantly higher scores among dance and drama students than among those majoring in physical and health education (or English). Their findings provide further indication that those at risk to eating disorders gravitate towards activities of endeavour that emphasize body image, rather than towards areas merely emphasizing physical exercise.

The message seems to be clear here for coaches fitness leaders and instructors: namely, physical activity in and of itself does not precipitate eating disorders; however, if programs are presented with an emphasis on elitism and winning or body image as the means to lose weight, they may very well serve as a precipitating or perpetuating activity for the eating disordered individual.

Brooks Johnson, Stanford track coach and head of the 1984 U.S. women's Olympic program, is convinced eating disorders are becoming more common among college athletes. "The problem is more or less directed towards distance programs, more so at elitist schools because of the type of people who attend them". (Windsor Star, 1986; C5). Kate Moore, women's track coach at Columbia University in New York City, concurs and goes on to point out,

> One coach in my league jokingly refers to the 10,000m in the college nationals as the 'anorexic parade.' Some coaches fear that if their athletes undergo therapy for an eating disorder, they may never return to their event as competitively driven as before. What is the source of motivation for the athlete? And will the psychiatrist work successfully with the athlete to replace the unhealthy drive with a motivation that is healthy? Also coaches harbour a slight suspicion that doctors will encourage athletes to abandon a sport altogether. Coaches have a vested interest in their athletes that sometimes in myopic, because coaches' success is contingent on their athletes' performances. (Moore, 1985: 95)

Johnson, in Athletic Director and Coach (November, 1986: 4), estimates that "five out of twenty female athletes have an eating disorder, running all the way from crazy dieting from bulimia to anorexia". She warns coaches to watch female athletes for signs of obsession with weight, body changes and behaviour during meals such as seeming preoccupation with food, and leaving the table too soon to go to the washroom, presumably to regurgitate.

Former world figure skating champion, Rosalynn Summers of the United States failed to live up to expectations of winning an Olympic Gold Medal in 1984, and subsequently had to take a break from her professional skating career due to recurring bouts of bulimia (Smith, Globe and Mail, November 8, 1986: A16). Nadia Comenici failed to participate in the Edmonton World Student FISU Games in 1984 due to her emaciated condition as a result of bulimorexia. Mary Lou Retton, gold medal U.S. darling of the 1984

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L.A. Olympics admitted at Toledo Hospital, Ohio in the fall of 1985 that she was under treatment for eating disorders which had developed and prevailed throughout her gymnastic career.

The list goes on and on -- Kathy Ormsby, the seventeen-year-old athlete who is paralyzed from the waist down as a result of a suicide attempt by jumping off a bridge during a 10,000 m run. Seventeen year old marathon runner Mary Wazeter is another eating disordered marathon athlete who ended up as a quadraplegic as the result of a suicide attempt motivated by the pressures of running and eating disorders. Wazeter's club coach during her high school years never had made the connection between running and eating disorders:

> I didn't know the ramifications went any further than weight. I didn't realize that when she talked of not eating, that it was a health problem.
> (Tracey Sundland, Globe and Mail, March 19, 1983: S5)

Wazeter recalls that throughout her high school career, and particularly at the Olympic development training camp at Lehigh University, "Over and over again, they would say things like, "Now, when you girls start maturing and start getting to college and putting on weight, you really have to be careful, you really have to watch your weight". She went on to say:

> I know now for a fact how important the weight factor is with lots of colleges, since before a visit to the University of Virginia I was told about weekly weigh-ins and a pound-penalty system for violators. When I went there to visit, I wanted to be super-thin so I could impress the coaches (Ibid)

Canadians sometimes have a tendency to think that these horror stories from the United States never happen here in Canada. Unfortunately, nothing could be further from the truth. Dr. Frank Young of Calgary's Holy Cross Hospital is quoted as saying:

> Both anorexia and bulimia are increasingly present and associated with sports with weight classifications; marathon running where 'if you're gaunt, you're in shape'; gymnastics and figure skating where extra pounds are a drag on performance and an eyesore to judges; rowing and wrestling are also involved. (Verve, 1986: 40)

Muriel LeDoux, a Montreal nutritionist, who works closely with athletes and fitness devotees, is quoted as saying, "I used to think it was mainly a problem with girls in gymnastics and figure skating - now, you name it. (Verve, August/September, 1986: 42). Self-confessed victims of physical activity and eating disorders include:

1. Barbara Warner, championship downhill skier, No. 2 on the Quebec team winner of a gold in the 1988 Olympics - the victim of bulimia and attempted suicide.
2. Mary-Ellen Wilcox, Canadian junior gymnastics champion of 1975 when she was fifteen, who, in her own words, "became a victim of her womanly body at sixteen, despite rigorously controlled eating, bottles of dextrose tablets and laxatives, and containers of honey to sustain her energy". Her legacy today - hypoglycemia and erratic eating habits.
3. Charlene Wong knows how hard it is to have the strength to do a triple axle and still look like a ballerina. In 1984 at the Canadian figure skating championships, the five-foot-four figure skater finished second when she weighed 112 lbs. She was told to lose eight pounds over the summer. She lost them and kept going, thinking the more she lost the better. By fall she weighed ninety pounds and had turned into a fitness fanatic, living on a diet of cereal and muffins. Charlene Wong told the CBC radio program, "Morningside",

> Suddenly, dieting became more important than skating. I wasn't even really aware of it. Being a perfectionist had something to do with it, too. I am a very disciplined person. I want everything to be perfect, even my weight. (Verve, August/September, 1986: 44)

Therapist Patty Perry, Director of the Eating Disorder Clinic Inc. of Toronto, believes that the marketing of fitness has something to do with the increase in eating disorders.

> As female consumers of fashion or fitness, we are comparing ourselves to stereotypes that are often quite disturbed in eating and exercise habits. For example, Jane Fonda has the thin, fit body women desire, but this is the result of bulimia as a teenager, abuse of speed and diuretics to stay model-svelte until her early thirties, and involvement and promotion in excessive weight control up to the present. We sell fitness as an unmixed blessing, but this is not the case. Indeed, the fad proportion of fitness may be contributing to eating disorders. Women are trying to achieve weight control through overexercise. It's not true that the more you do the more it does for you. (Hooked on Perfection Verve, August/September, 1986; 79-80).

Perry goes on to point out that those who take fitness/sport too far may be called 'obligatory exercisers'. They behave in a way similar to eating disordered athletes in that they must have an exercise fix before they allow themselves to eat anything, use exercise to burn off calories, and won't stop even if they are exhausted or injured. For them, exercise is an excessive and cumpulsive pursuit of the ideal body, not an activity that enhances wellbeing.

CONCLUSION

P.J.V. Beaumont of the Royal Alexandria Hospital in Australia introduced the phrase "exercise anorexia". Saskatchewan psychiatrist, Arunda Sirica refers to "anorexia athletica". University of Windsor studies have identified what could be referred to as "cosmetic fitness ranging from starvation to steroids. Sport/Fitness induced eating disorders and steroid use are a form of iatrogenesis or education and health profession induced illness.

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Socio-cultural factors alone do not cause eating disorders or steroid abuse. Families alone do not cause eating disorders. Fitness/sport programs alone do not cause eatings disorders, or everyone who participates would have an eating disorder and/or be abusing steroids. Parents, sport administrators, teacher/coaches, fitness instructors do not cause, cannot control, and cannot cure eating disorders or drug abuse. They can contribute, either positively or negatively, to the prevention of the problem or prognosis in this illness. A positive contribution can be made by identification, facing up to the problem, practising Tough Love intervention techniques, referral to a qualified health professional, and providing both eating disordered individual and themselves with alternate coping mechanisms and lifestyle behaviours.

It is generally acknowledged in sport and fitness circles that to date compulsive exercise and involvement in elite or overly competitive athletic programs has been part of the problem; however, we can be part of the solution. Coaches and fitness instructors are presented with a tough challenge:

1. Study the signs, symptoms and characteristics of eating disorders and steroid use.
2. Develop the ability to identify and refer individuals with eating disorders or drug problems for professional assistance.
3. Market and implement fitness for weight management rather than weight reduction, addressing the fact that being underweight is at least equally hazardous to your health as being overweight. Coaches should also council their athlete to moderation in a well-rounded mix of school, sports, and social life and structure programs to avoid the excess of steroid use.

4. Incorporate fitness and related activities (dance, music, cooperative games and relaxation) as alternate stress management techniques to avoid addiction to either eating disorders, alcohol or drugs.
5. Become significant advocates of the shift from elitist image of fitness/sport which contributes to unrealistic goals and false image to mass participation and a happy and healthy moderate activity program.
6. Challenge yourself to live and present yourself as a healthy, happy role model leading a balanced life and caring for yourself as well as others.

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